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Exploring Building Information Modeling (BIM) Awareness in Sarawak Construction Industry

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Abstract. Building Information Modeling (BIM) is a digital view which represent the functional and physical of building in construction project. BIM has become a necessity in today's construction industry from the point of providing digital representation and integration between project stakeholders, as well as providing the possibility of processing and storing the project information in a common database. Despite these advantages, the acceptance of BIM remain at a marginal level. Sarawak construction industry itself has fallen far behind on BIM implementation. Moreover, as construction projects in the state of Sarawak become increasingly diversify and complex, the need for BIM in Sarawak becomes increasingly important. Therefore, this paper has explored the awareness of BIM in the Sarawak construction industry. To realize this, a structured questionnaire survey form was distributed to 300 construction stakeholders through simple random sampling method. Out of the 300 questionnaire surveys, a total of 133 were returned and analyzed using descriptive, mean and factor analysis. The results were tabulated and ranked in descending order. Findings of this paper revealed that awareness level of BIM is gaining its momentum and the implementation of related software in Sarawak construction industry is still low. Factor analysis procedure for awareness of BIM has been conducted and this has extracted two distinct components which is awareness on knowledge and software with eigenvalues exceeding 1.0. This paper therefore encourages and recommends BIM implementation in the Sarawak construction industry, derivable through BIM awareness to increase productivity, better coordination, and minimized errors and repetition of works in the construction operations.

1. Introduction

In early 2000, Building Information Modelling (BIM) is considered a key technology not built within the framework of Architecture, Engineering & Construction (AEC) [1]. Parallel with the improvement in construction industry around the world, the subject BIM has become an essential topic to the point where the conception is being enlarge into the realm it was not primitively apprehended to deliver [2]. In Malaysia, BIM can be effectively managing the construction projects and has been applied by AEC industries [3].

The definition of BIM is systematically changing due to the rapid improvement of Information Technologies in AEC, along with in Architecture, Engineering, Construction and Owner/Operator (AECO) [4]. It can be defined as headlining the universal concepts for that commodity determination output build on the management of building cerebral 3D virtual model correlated with construction process starting from project initiation until demolition. BIM can be defined as a series or combination

